

### **REMARKS**

Claims 6-30 were pending and under consideration.

In the February 22, 2002 final Office Action, the Examiner requested Applicants to cancel nonelected claims 1-5 and to propose drawing corrections. The Examiner also objected to  
5 claims 12-13, rejected claims 9, 12-13, 16, 23, 25 and 28-30 under 35 USC 112(2), rejected claims 6-7 as anticipated by Ritto (U.S. 5,519,178), rejected claims 6 and 8 as anticipated by Iwata (U.S. 4,807,294), rejected claims 9-11, 17, 19, and 25-26 as unpatentable over Iwata, rejected claims 9-11, 14-18, and 21-30 as unpatentable over Marquiss (U.S. 4,385,210), rejected claims 9 and 20-25 as unpatentable over Pfleiderer (U.S. 4,821,330).

10 Claims 1-5 and 11-12 are canceled without prejudice. Claims 13, 23, and 30 are amended. Claims 6-10 and 13-30 now are pending and under consideration.

#### **I. Election/Restriction**

The Examiner requests Applicants to cancel nonelected claims 1-5. Since Applicants have canceled nonelected claims 1-5 as noted above, Applicants respectfully request that the  
15 Examiner withdraw the request.

#### **II. Drawings**

The Examiner requests Applicants to propose drawing corrections showing every feature of the invention specified in the claims. Since Applicants have proposed drawing corrections showing every feature of the invention specified in the claims, Applicants respectfully request  
20 that the Examiner withdraw the request.

Applicants additionally amended the specification to better identify these features in the figures. Under MPEP 2163.06, information contained in any part of the application as filed may

be added to any other part of the application without introducing new matter. Accordingly, additional language related to "an interior surface of the second layer defines a throat" was copied from page 1, lines 25-30 of the specification and added to the end of the paragraph on page 5 that begins at line 17.

5 **III. Objections: Claims 12-13**

The Examiner objected to claims 12-13 for failing to further limit the previously claimed subject matter. Since Applicants have canceled claim 12 and amended claim 13, Applicants respectfully request that the Examiner withdraw the objection.

**IV. 35 USC 112(2): Claims 9, 12-13, 16, 23, 25 and 28-30**

10 The Examiner rejected claims 9, 12-13, 16, 23, 25 and 28-30 under 35 USC 112(2) as indefinite for failing to particularly point out and distinctly claim the subject matter that Applicants regard as the claimed invention.

Concerning claims 9, 12-13, 16, 25 and 28-29, the Examiner supports the 112(2) rejection by asserting that the noted claim limitation is not clearly defined and well described in the  
15 specification. The 112(2) test is whether the noted claim limitation is particularly pointed out and distinctly claimed in the claims. Since the Examiner used the wrong test, the Examiner failed to make out a prima facie case of indefiniteness under 35 USC 112(2).

Concerning claims 23 and 30, the Examiner asserts that the noted limitation lacks sufficient antecedent basis. Applicants have amended claims 23 and 30.

20 For the above reasons, Applicants respectfully request that the Examiner withdraw the rejection to the claims.

V. 35 USC 102(b)

A. Claims 6-7

The Examiner rejected claims 6-7 under 35 USC 102(b) as anticipated by Ritto (U.S. Patent No. 5,519,178).

5       **Claim 6** recites:

a core layer of sound-damping material made to have a predetermined outline smaller than that of said first layer so as to form a peripheral margin of molding material ... a second surface layer ... bonded to said first layer in the peripheral margin.

Ritto does not teach the claimed peripheral margin of molding material.

10       The Examiner asserts in the "Response to Amendment" on page 9 of the Office Action that Iwata (U.S. 4,807,294) teaches the above subject matter. Since the Examiner failed to establish that Ritto teaches the above subject matter, Applicants respectfully request that the Examiner withdraw the rejection of claim 6 under 35 USC 102(b) as being anticipated by Ritto (U.S. Patent No. 5,519,178).

15       **Claim 6** recites:

a second surface layer of molding material, having an outline similar to that of said first layer and ... bonded to said first layer

The second surface layer 130' of Ritto is separated from the first layer 122 by the core region 126. Thus, the second surface layer 130' of Ritto is not bonded to the first layer 122.

20       **Claim 6** recites:

a second surface layer of molding material, having an outline similar to that of said first layer and ... bonded to said first layer... to form a sealed core region containing said core layer

Ritto does not teach the sealed core region containing the core layer.

The Examiner asserts in the "Response to Amendment" on page 9 of the Office Action that the resin fills in the spaces 140 between the core region 126 (Ritto Fig. 4) to form a sealed core region. However, as shown in Ritto Fig. 1, Fig. 3, and Fig. 4, the uppermost edge of the core region 126 is not sealed. Rather, the uppermost edge of the core region 126 is exposed.

5        **Claim 7** is allowable by reason of its dependency on claim 6.

For the above reasons, Applicants respectfully request that the Examiner withdraw the rejection to the claims.

**B. Claims 6 and 8**

10        The Examiner rejected claims 6 and 8 under 35 USC 102(b) as anticipated by Iwata (U.S. Patent No. 4,807,294).

**Claim 6** recites:

*a first surface layer of molding material ... and a second surface layer of molding material*

15        The Iwata Examiner states that Iwata teaches a first surface layer (2) and a second surface layer (2). However, since Iwata teaches at col. 2, line 39 and Fig. 1 that the foam sheet 2 of Iwata is only one layer, Iwata does not teach a first surface layer and a second surface layer.

20        The Examiner asserts in the "Response to Amendment" on page 9 of the Office Action that "the panel (2) has at least two layers to form a sealed core region, and the core layer is embedded in the seal core region (Figs. 1-2) as claimed." Iwata Fig. 1 shows only one layer for foam sheet 2. Iwata Figs. 2A-2B do not show the foam sheet 2 or even a panel (2).

**Claim 6** recites:

a core layer of sound-damping material

The Examiner presents the piezoelectric sheet 3 of sound-damping material 8 of Iwata teaching the claimed core layer. However, the piezoelectric sheet 3 of Iwata is not of sound-damping material. Moreover, the sound-damping material 8 of Iwata is not a core layer as recited in the claims. Thus, Iwata does not teach the above claimed subject matter.

**Claim 6** recites:

a core layer of sound-damping material made to have a predetermined outline smaller than that of said first layer so as to form a peripheral margin of molding material ... a second surface layer ... bonded to said first layer in the peripheral margin.

Iwata does not teach the claimed peripheral margin of molding material.

The Examiner asserts in the "Response to Amendment" on page 9 of the Office Action that "the panel (2) has at least two layers to form a sealed core region, and the core layer is embedded in the seal core region (Figs. 1-2) as claimed." Iwata Fig. 1 shows only one layer for foam sheet 2. Iwata Figs. 2A-2B do not show the foam sheet 2 or even a panel (2).

**Claim 6** recites:

a second surface layer of molding material, having an outline similar to that of said first layer and ... bonded to said first layer

The Iwata Examiner states that Iwata teaches a first surface layer (2) and a second surface layer (2). However, since Iwata teaches at col. 2, line 39 and Fig. 1 that the foam sheet 2 of Iwata is only one layer, Iwata does not teach a second surface layer bonded to the claimed first layer.

The Examiner asserts in the "Response to Amendment" on page 9 of the Office Action that "the panel (2) has at least two layers to form a sealed core region, and the core layer is

embedded in the seal core region (Figs. 1-2) as claimed." Iwata Fig. 1 shows only one layer for foam sheet 2. Iwata Figs. 2A-2B do not show the foam sheet 2 or even a panel (2).

**Claim 6** recites:

*a second surface layer of molding material, having an outline similar to that of said first*

5 *layer and ... bonded to said first layer... to form a sealed core region containing said core layer*

The Examiner presents the piezoelectric sheet 3 of sound-damping material 8 of Iwata teaching the claimed core layer. However, as shown in Iwata Fig. 1, 6, and 7, the piezoelectric sheet 3 of sound-damping material 8 of Iwata does not form a sealed core region.

**Claim 8** is allowable by reason of its dependency on claim 6.

10 For the above reasons, Applicants respectfully request that the Examiner withdraw the rejection to the claims.

## VI. 35 USC 103(a)

### A. Claims 9-11, 17, 19, and 25-26

The Examiner rejected independent claims 9 and 25, and dependent claims 10-11, 17, 19,  
15 and 26 under 35 USC 103(a) as unpatentable over Iwata (U.S. Patent No. 4,807,294).

**Claim 9** and **claim 25** recite:

*a second layer, wherein the second layer is fixed to the first layer*

The Examiner states that Iwata teaches a first layer (2) and a second layer (2). However, since Iwata teaches at col. 2, line 39 and Fig. 1 that the foam sheet 2 of Iwata is only one layer,  
20 Iwata does not teach a first layer and a second layer.

The Examiner asserts in the "Response to Amendment" on page 9 of the Office Action that "the panel (2) has at least two layers to form a sealed core region, and the core layer is

embedded in the seal core region (Figs. 1-2) as claimed." Iwata Fig. 1 shows only one layer for foam sheet 2. Iwata Figs. 2A-2B do not show the foam sheet 2 or even a panel (2).

**Claim 9 and claim 25** recite:

a second layer, wherein the second layer is fixed to the first layer so as to define a core ...

5 and ... sound damping material disposed in the core

The Examiner presents the piezoelectric sheet 3 of Iwata teaching the claimed core. However, Iwata does not teach sound damping material disposed in the piezoelectric sheet 3. Thus, Iwata does not teach the above claimed subject matter.

**Claim 9 and claim 25** recite:

10 a second layer, wherein the second layer is fixed to the first layer so as to define ... a  
margin

The Examiner presents the foam sheet (2) of Iwata as teaching the first and second layer and presents the sheet speaker 1 of Iwata as teaching the claimed margin. However, the foam sheet (2) is not fixed to the foam sheet (2) so as to define the sheet speaker 1 of Iwata. Thus,  
15 Iwata does not teach the above claimed subject matter.

**Claim 9 and claim 25** recite:

a second layer, wherein the second layer is fixed to the first layer so as to define ... a  
margin, wherein the margin comprises a first flange and a second flange

The Examiner presents the foam sheet (2) of Iwata as teaching the first and second layer  
20 and presents the sheet speaker 1 of Iwata as teaching the claimed margin. The Examiner asserts that it would be obvious to attach a plurality of flanges to the sheet speaker 1 (loudspeaker component 1). However, the claim does not recite that the first and second flange are attached to the margin. Moreover, the Iwata foam sheet (2) cannot define a first and a second flange.

**Claim 9 and claim 25** recite:

sound damping material disposed in the core so as to be completely encased by the first layer and the second layer

The Examiner presents the insulating material 8 of Iwata as teaching the claimed sound  
5 damping material, the piezoelectric sheet 3 of Iwata as teaching the claimed core, and the foam  
sheet (2) of Iwata as teaching the claimed first layer and second layer. However, as shown in  
Iwata Figs. 1, 6, and 7, the insulating material 8 of Iwata is not disposed in the piezoelectric sheet  
3 so as to be completely encased by the foam sheet (2).

**Claim 9** recites:

10 wherein the first layer, the sound damping material, and the second layer comprise a  
three-layer laminate

The Examiner presents the foam sheet (2) of Iwata as teaching the first layer and second  
layer of the claimed invention, and the insulating material 8 of Iwata as teaching the claimed  
sound damping material. However, the foam sheet (2) and the insulating material 8 of Iwata do  
15 not comprise a three-layer laminate.

**Claim 9** recites:

wherein the first flange and the second flange extend to raise the three-layer laminate so  
that an interior surface of the second layer defines a throat.

Iwata does not teach this subject matter.

20 **B. Claims 9-11, 14-18, and 21-30**

The Examiner rejected independent claims 9 and 25, and dependent claims 10-11, 14-18,  
21-24, and 26-30 under 35 USC 103(a) as unpatentable over Marquiss (U.S. Patent No.  
4,385,210).



**Claim 9 and claim 25** recite:

a second layer, wherein the second layer is fixed to the first layer so as to define ... a margin

The Examiner presents a first spaced layer 61(1), a second space layer 61(2), and the frame 12 of Marquiss as teaching the above elements. However, the second space layer 61(2) is not fixed to the first spaced layer 61(1) so as to define the frame 12.

**Claim 9 and claim 25** recite:

a second layer, wherein the second layer is fixed to the first layer so as to define ... a margin, wherein the margin comprises a first flange and a second flange

The Examiner presents a first spaced layer 61(1), a second space layer 61(2), and the frame 12 of Marquiss as teaching the above elements. However, the second space layer 61(2) is not fixed to the first spaced layer 61(1) so as to define the frame 12 comprising a first flange and a second flange.

**Claim 9 and claim 25** recite:

sound damping material disposed in the core so as to be completely encased by the first layer and the second layer

The Examiner presents a first spaced layer 61(1), a second space layer 61(2), and the fiberglass 62 of Marquiss as teaching the above elements. Although the first spaced layer 61(1) and the second space layer 61(2) surround the fiberglass 62 of Marquiss (Marquiss col. 9, lines 34-36), the ends of the fiberglass 62 are not covered by the first spaced layer 61(1) and the second space layer 61(2). Accordingly, the fiberglass 62 is not disposed in the core so as to be completely encased by the first spaced layer 61(1) and the second space layer 61(2).

**Claim 9** recites:

wherein the first flange and the second flange extend to raise the three-layer laminate so that an interior surface of the second layer defines a throat

The Examiner presents a second space layer 61(2) as teaching the claimed second layer.

5 However, Marquiss does not teach the claimed subject matter.

**C. Claims 9 and 20-25**

The Examiner rejected independent claims 9 and 25, and dependent claims 21-24 under 35 USC 103(a) as unpatentable over Pfleiderer (U.S. Patent No. 4,821,330).

**Claim 9** and **claim 25** recite:

10 a second layer, wherein the second layer is fixed to the first layer so as to define ... a margin

The Examiner presents a first connecting element 6(1), a second connecting element 6(2), and either the moving-coil support 1/dome 2 or the outer diaphragm part 3 of Pfleiderer as teaching the above elements. However, the second connecting element 6(2) is not fixed to the  
15 first connecting element 6(1) so as to define either the moving-coil support 1/dome 2 or the outer diaphragm part 3.

**Claim 9** and **claim 25** recite:

a second layer, wherein the second layer is fixed to the first layer so as to define ... a margin, wherein the margin comprises a first flange and a second flange

20 The Examiner presents a first connecting element 6(1), a second connecting element 6(2), and either the moving-coil support 1/dome 2 or the outer diaphragm part 3 of Pfleiderer as teaching the above elements. However, the second connecting element 6(2) is not fixed to the

first connecting element 6(1) so as to define either the moving-coil support 1/dome 2 or the outer diaphragm part 3 comprising a first flange and a second flange.

**Claim 9 and claim 25** recite:

sound damping material disposed in the core so as to be completely encased by the first

5 layer and the second layer

The Examiner presents a first connecting element 6(1), a second connecting element 6(2), and material described at Pfleiderer col. 9 lines 25-51 as teaching the above elements. Although the first connecting element 6(1) and the second connecting element 6(2) are shown surrounding some Pfleiderer material (Pfleiderer Fig. 16e), the ends of this surrounded Pfleiderer material are  
10 not covered by the first connecting element 6(1) and the second connecting element 6(2).

Accordingly, the noted Pfleiderer material is not disposed in the core so as to be completely encased by the first connecting element 6(1) and the second connecting element 6(2).

**Claim 9** recites:

wherein the first flange and the second flange extend to raise the three-layer laminate so

15 that an interior surface of the second layer defines a throat

The Examiner presents a second connecting element 6(2) as teaching the claimed second layer. However, Pfleiderer does not teach the claimed subject matter.

**VII. Conclusion**

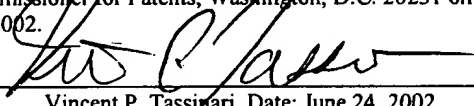
In view of the foregoing, it is believed that the claims now pending are in condition for allowance. Such action is earnestly solicited at the earliest possible date. If the Examiner believes that a conference would be of value in expediting the prosecution of this application, the Examiner is invited to telephone the undersigned counsel to arrange for such a conference.

Respectfully submitted,  
SONNENSCHN NATH & ROSENTHAL  
Attorneys for Applicants

Dated: June 24, 2002

By: 

Vincent P. Tassinari, Esq.  
Reg. No. 42,179

<p>SONNENSCHN NATH &amp; ROSENTHAL P.O. Box 061080 Wacker Drive Station, Sears Tower Chicago, IL 60606-1080</p> <p>Attorney Customer Number: 026263 Phn: (312) 876-8000 Fax: (312) 876-7934</p>	<p><b><u>CERTIFICATE OF DEPOSIT</u></b></p> <p>I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as First Class Mail in an envelope addressed to: BOX AF, Commissioner for Patents, Washington, D.C. 20231 on June 24, 2002.</p> <p> Vincent P. Tassinari Date: June 24, 2002</p>
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VIII. APPENDIX TO RESPONSE "B" TO FINAL OFFICE ACTION:  
VERSION WITH MARKINGS TO SHOW CHANGES MADE



ATTORNEY DOCKET NUMBER

IN THE TITLE OF THE INVENTION

SOUND-DAMPING LAMINATE SYSTEM FOR LOUDSPEAKER STRUCTURE

FIGURES

Changes are noted on the figures.

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IN THE SPECIFICATION

The paragraph beginning at page 5, line 17:

In the molding process, the panel-like region containing core 10A becomes a three-layer laminate 12 while surrounding regions (margin 14), or at least two opposite edge regions included as part of the margin 14, each become integrated into a single homogeneous mass of cured molding material which may serve both as a peripheral seal to retain the material of core 10A and as a ~~functional~~ first flange 16 and a second flange 18, a mounting, or an attachment region for component 10. In a throat 20 of a horn loudspeaker having the component 10, the internal surface 22 of the second layer 24 may be exposed to a field of high energy sound pressure, while at the opposite surface 26 of the first layer 28 at the exterior of the horn, sound vibrations generally are unwanted due to their potential influence on the directivity and overall acoustic performance.

CLAIMS

13. (Amended One Time) The loud speaker component of claim ~~11~~9, wherein each of the first flange and the second flange are defined by a first state as individual pieces and a second  
5 state as a single homogeneous mass of cured molding material.

23. (Amended One Time) The loud speaker component of claim 9, wherein ~~the~~a collective of the margin and the three-layer laminate defines a thickness that is substantially constant throughout the margin and the three-layer laminate.

10 30. (Amended One Time) The loud speaker component of claim 29, wherein ~~the~~a collective of the margin and the three-layer laminate defines a thickness that is substantially constant throughout the margin and the three-layer laminate.